

IN THE CLAIMS

The following is a complete listing of revised claims with a status identifier in parenthesis.

LISTING OF CLAIMS

1. (Previously Presented) A method for transmitting information in a communication channel of a wireless communication system, the method comprising:
dividing the communication channel into a plurality of time slots of equal duration;
sub-dividing, on other than a time division basis, each of the plurality of time slots to comprise two or more sub-slots, and
variably allocating a number of contiguous sub-slots allocated to at least one of the time slots, within a transmission in the channel, from a number of sub-slots allocated to at least one other time slot within the transmission.
2. (Original) The method according to claim 1, wherein each of the two or more sub-slots within a particular time slot is separately transmitted according to a code division multiple access scheme.
3. (Original) The method according to claim 2 wherein, in any one of the plurality of time slots, each of a plurality of transmissions are separately coded and carried in a separate sub-slot simultaneously in such time slot.
4. (Original) The method according to claim 3 wherein each of the plurality of transmissions correspond to a separate user of the wireless communication system.
5. (Original) The method according to claim 3, wherein each of the plurality of transmissions correspond to separate transmissions of a single user of the wireless communication system.

6. (Original) The method according to claim 1, wherein each of the two or more sub-slots within a particular time slot corresponds to a different frequency according to a frequency division multiple access scheme.

7. (Previously Presented) The method according to claim 1, wherein a single transmission can be carried in one or more contiguous sub-slots in one or more contiguous time slots.

8. (Original) The method according to claim 1, wherein the communication channel comprises time slots each having a duration of 1.25 milliseconds and wherein each of the time slots comprises at least two sub-slots.

9. (Original) The method according to claim 1, further comprising:
transmitting a separate control channel for each separate transmission carried in the communication channel.

10. (Original) The method according to claim 9, wherein the duration of the separate control channel is dependent upon the number of sub-slots carrying the corresponding transmission in the communication channel.

11. (Original) The method according to claim 9, wherein the communication channel is a forward packet data channel (F-PDCH), wherein information is transmitted as encoder packets in the forward packet data channel (F-PDCH), and wherein the separate control channel is a forward secondary packet data control channel (SPDCCH).

12. (Original) The method according to claim 11, wherein the forward secondary packet data control channel (SPDCCH) includes:

a sub-slot start field for identifying a sub-slot within a time slot in which a particular transmission starts; and

a sub-slot count field for identifying the total number of sub-slots that carry the particular transmission.

13. (Original) The method according to claim 11, wherein a plurality of forward secondary packet data control channels (SPDCCH) correspond to a plurality of simultaneous transmissions on the forward packet data channel (F-PDCH), and wherein each of the plurality of secondary packet data control channels (SPDCCH) identifies a sub-slot start position within a time slot in which a particular transmission starts.

14. (Previously Presented) A method for transmitting information in a communication channel of a wireless communication system, the method comprising:

dividing the communication channel into a plurality of time slots of equal duration according to a time division multiple access scheme; and

sub-dividing each of the plurality of time slots to comprise two or more sub-slots according to a code division multiple access scheme,

variably allocating a number of contiguous sub-slots allocated to at least one of the time slots, within a transmission in the channel, from a number of sub-slots allocated to at least one other time slot within the transmission.

15. (Previously Presented) A method for transmitting information in a communication channel of a wireless communication system, the method comprising:

variably allocating a number of contiguous sub-slots allocated to at least one of the time slots, within a transmission in the channel, from a number of sub-slots allocated to at least one other time slot within the transmission;

time multiplexing a plurality of time slots of equal duration in the communication channel; and

code multiplexing two or more sub-slots within each of the plurality of time slots.

16. (Previously Presented) The method according to claim 15, wherein each of the two or more sub-slots is capable of carrying a separately coded transmission within the communication channel so that multiple simultaneous transmissions can occur in any given time slot.

17. (Previously Presented) The method according to claim 1, wherein bandwidth in the communication channel is allocated on a fractional basis to carry a plurality of transmissions using a combination of a variable number of contiguous sub-slots and a variable number of contiguous time slots.

18. (Previously Presented) The method according to claim 1, wherein transmissions within the communication channel include two or more transmissions selected from the group consisting of new transmissions, retransmissions, acknowledgements (ACKs), negative acknowledgements (NACKs), and multi-level ACK/NACK message corresponds to multi-level ACK/NACK messages.

19. (Previously Presented) The method according to claim 18, wherein a multi-level ACK/NACK message corresponds to multiple transmissions that end within the same time slot.

20. (Previously Presented) The method according to claim 14 further comprising, within each of the two or more sub-slots, carrying a separately coded transmission within the communication channel so that multiple simultaneous transmissions can occur in any given time slot.